

20  
CLAIMS

We claim:

1. A storage system, comprising:

a storage unit;

a wheel arrangement; and

a guide arrangement including at least one rail;

5 wherein the storage unit, the wheel arrangement and the guide arrangement comprise a set of components that are configured to be transported together in a disassembled state to an installation site including a support surface, and to be assembled at the installation site, wherein the wheel arrangement is engaged with the storage unit and wherein the at least one rail of the guide arrangement is adapted to be secured to the support surface of the  
10 installation site, and wherein the storage unit when assembled is engageable with the at least one rail via the wheel arrangement to provide movement of the storage unit on the at least one rail relative to the support surface.

2. The storage system of claim 1, further comprising a stop arrangement configured to be transported together with the storage unit, the wheel arrangement and the guide arrangement, wherein the stop arrangement is interposed between the storage unit and the rail to control the range of movement of the storage unit relative to the rail.

3. The storage system of claim 1, further comprising a retainer arrangement configured to be transported together with the storage unit, the wheel arrangement and the guide arrangement, wherein the retainer arrangement is configured to be carried by the storage unit and to selectively engage the rail to selectively maintain the storage unit in  
5 position relative to the support surface.

4. The storage system of claim 1, wherein the rail is adapted to be adhesively secured to the support surface of the installation site.

5. The storage system of claim 4, wherein the rail is adapted to be adhesively secured to the support surface by means of an adhesive interposed between the support surface and a facing engagement surface defined by the rail.

6. The storage system of claim 5, wherein the adhesive comprises an adhesive member secured to the engagement surface of the rail.

7. The storage system of claim 1, wherein the wheel arrangement is configured to be secured to the storage unit in either a first orientation providing movement of the storage unit in a first direction or a second orientation providing movement of the storage unit in a second direction transverse to the first direction, and wherein the rail can be  
5 engaged with the support surface so as to guide movement of the storage unit in either the first direction or the second direction.

8. The storage system of claim 7, wherein the wheel arrangement comprises a series of wheel modules, wherein the storage unit defines a series of lower corners and wherein the wheel modules are configured for engagement with selected ones of the lower corners of the storage unit so as to selectively orient the wheels to provide movement of the  
5 storage unit in either the first direction or the second direction.

9. A mobile storage system, comprising:

a plurality of storage units;

a guide arrangement configured for engagement with a support surface, wherein the guide arrangement includes at least one guide rail for each storage unit; and

5 a series of wheeled members interposed between each storage unit and the guide arrangement, wherein each storage unit and its associated wheeled members include a cooperative positioning arrangement configured to position the wheeled members relative to the storage unit in either a first orientation or a second orientation, and wherein the guide rails are adapted to be engaged with the support surface such that movement of the storage  
10 units on the guide rails provides movement of the storage units in a first direction when the wheeled members are in the first orientation or in a second direction transverse to the first direction when the wheeled members are in the second orientation.

10. The mobile storage system of claim 9, wherein the storage unit, the wheeled members and the guide arrangement comprise a set of components that are configured to be transported together in a disassembled state to an installation site including the support surface, and to be assembled at the installation site wherein the at least one rail of

5 the guide arrangement is adapted to be secured to the support surface of the installation site, and wherein the storage unit when assembled is engageable with the at least one rail via the wheeled members to provide movement of the storage unit on the at least one rail relative to the support surface.

11. The mobile storage system of claim 10, wherein the rail is adapted to be adhesively secured to the support surface of the installation site.

12. The mobile storage system of claim 9, wherein each wheeled member comprises a wheel secured to a mounting member, wherein the mounting member forms a part of the cooperative positioning arrangement and is configured to be engaged with the storage unit in so as to orient the wheel in either the first orientation or the second  
5 orientation.

13. The mobile storage system of claim 12, wherein the wheel is rotatably secured to the mounting member in a fixed location and wherein the storage unit defines a series of lower corners, wherein the mounting member is configured for engagement with a selected one of the lower corners of the storage unit so as to selectively orient the wheel in  
5 either the first orientation or the second orientation.

14. A method of constructing a mobile storage system, comprising the acts of:  
providing one or more storage units;  
providing a guide arrangement including at least one rail member;  
securing the guide arrangement to a support surface; and  
5 mounting a series of wheel members to each storage unit, wherein at least a pair of the wheel members are configured to engage the rail member to provide guided movement of the storage unit relative to the support surface, wherein the steps of securing the guide arrangement to the support surface and mounting the wheel members to each storage unit are carried out by selecting either a first orientation in which the wheel members and the rail  
10 member provide movement of the storage unit in a first direction, or a second orientation in which the wheel members and the rail member provide movement of the storage unit in a second direction transverse to the first direction.

15. The method of claim 14, wherein the step of providing one or more storage units comprises providing a series of storage units and at least one rail member for each storage unit, and wherein the step of securing the guide arrangement to the support surface is carried out by either positioning the rail members in an end-to-end configuration in which adjacent rail members are aligned so as to provide lateral movement of the storage units toward and away from each other, or in a spaced apart configuration in which adjacent rail members are parallel to each other so as to provide axial movement of each storage unit between an extended position and a retracted position relative to the adjacent storage units.

16. The method of claim 15, wherein the step of securing the guide arrangement to the support surface is carried out by adhesively securing the rail members to the support surface.

17. The method of claim 15, wherein the step of mounting a series of wheel members to each storage unit is carried out so that the wheel members face in either a first direction for the first orientation or in a second direction for the second orientation.

18. The method of claim 17, wherein each wheel member comprises a wheel rotatably secured to a mounting member, and wherein the step of mounting the series of wheel members to each storage unit is carried out by engaging the mounting members to the storage unit to selectively position the wheel members to face in either the first direction or the second direction.

19. The method of claim 18, wherein the storage unit defines a series of lower corners, and wherein the step of engaging the mounting members to the storage unit is carried out by engaging the mounting members with selected ones of the lower corners of the storage unit so as to selectively position the wheel members to face in either the first direction or the second direction.

20. The method of claim 15, further comprising the step of positioning a stop arrangement between the rail members and the storage units for controlling movement of the storage units relative to the rail members.

21. The method of claim 20, wherein the step of positioning a stop arrangement between the rail members and the storage units is carried out when the rail

members are in the end-to-end configuration by securing a stop member to each of a pair of spaced ends defined by the end-to-end rail members, wherein each stop member engages a wheel member of an endmost one of the storage units to selectively prevent movement of the storage unit when the storage unit attains a predetermined position relative to the rail member.

22. The method of claim 20, wherein the step of positioning a stop arrangement between the rail members and the storage units is carried out when the rail members are in the spaced apart configuration by engaging a stop member between a pair of adjacent rail members that support each storage unit, wherein the stop member is configured to engage the storage unit when the storage unit is moved to a predetermined extended position relative to the rail members.

23. The method of claim 22, wherein the rail members and the stop member are configured such that a rearward pair of the wheel members of the storage unit remain in engagement with the rail members and a forward pair of wheel members are moved off the rail members and onto the support surface when the storage unit is moved to the extended position, and wherein the forward end of each rail member includes a wheel guide for moving the forward wheel members onto the rail members when the storage unit is moved from the extended position to the retracted position.

24. A kit of components for constructing a mobile storage system, comprising:  
a series of storage unit components adapted to be assembled to construct a storage unit;

a guide arrangement including at least one rail member, wherein the guide arrangement is configured to engage a support surface such as a floor; and

a series of wheel members, wherein the wheel members are configured to be mounted to the storage unit and are adapted to engage the at least one rail member for providing guided movement of the storage unit relative to the support surface.

25. The kit of components of claim 24, wherein the storage unit components, the guide arrangement and the series of wheel members comprise a set of components that are configured to be transported together in a disassembled state to an installation site

including the support surface, and to be assembled at the installation site, wherein the series  
5 of wheel members are engaged with the storage unit and wherein the at least one rail member  
of the guide arrangement is adapted to be secured to the support surface of the installation  
site, and wherein the storage unit when assembled is engageable with the rail member via the  
series of wheel members to provide movement of the storage unit on the rail member relative  
to the support surface.

26. The kit of components of claim 25, further comprising a stop member  
configured to be assembled to the rail member to control the range of movement of the  
storage unit relative to the rail member.

27. The kit of components of claim 26, further comprising a retainer member  
configured to be assembled to the storage unit, wherein the retainer member is adapted to  
engage the rail member for selectively maintaining the position of the storage unit relative to  
the rail member.

28. The kit of components of claim 24, wherein the rail member is adapted to  
be secured to the support surface by either positioning the rail member in an end-to-end  
relationship relative to rail members of adjacent storage units, so that the adjacent rail  
members are aligned to provide lateral movement of the storage units toward and away from  
5 each other, or in a spaced apart configuration in which adjacent rail members are parallel to  
each other so as to provide axial movement of each storage unit between an extended  
position and a retracted position relative to the adjacent storage units.

29. The kit of components of claim 28, wherein the rail member is adapted to  
be secured to the support surface by means of an adhesive interposed between the support  
surface and a facing engagement surface defined by the rail member.

30. The kit of components of claim 28, wherein each wheel member comprises  
a wheel rotatably secured to a mounting member, and wherein the wheel members are  
adapted to be mounted to the storage unit by engaging the mounting members to the storage  
unit to selectively position the wheel members to face in either a first direction or a second  
5 direction according to the desired direction of movement of the storage unit on the rail  
members.

31. The kit of components of claim 30, wherein the storage unit defines a series of lower corners when assembled, and wherein the mounting members are adapted to be secured to the storage unit by engaging the mounting members with selected ones of the lower corners of the storage unit so as to selectively position the wheel members to face in  
5 either the first direction or the second direction.

32. A method of constructing a mobile storage system including a series of storage units and a rail arrangement adapted to be secured to a support surface such as a floor for providing guided movement of the storage units relative to the support surface, comprising the step of selecting either a first configuration in which the storage units move  
5 laterally toward and away from each other to selectively create a space between adjacent storage units, or a second configuration in which the storage units move axially between a retracted position and an extended position, and selectively configuring the storage units and securing the rail arrangement to the support surface so as to provide either the first configuration or the second configuration.

33. The method of claim 32, wherein the step of selectively configuring the storage units is carried out by selecting a desired position for a series of wheel members, and securing the wheel members to the storage unit in the desired position.

34. The method of claim 33, wherein each wheel member comprises a wheel rotatably engaged with a mounting member, and wherein the step of securing the wheel members to the storage unit in the desired position is carried out by selectively orienting the mounting member in a desired position relative to the storage unit, and securing the  
5 mounting member to the storage unit.

35. The method of claim 34, wherein the storage unit defines a series of lower corners, and wherein the step of securing each mounting member to the storage unit is carried out by engaging the mounting member with a selected one of the lower corners of the storage unit so as to selectively position the wheel members to face in either a first direction  
5 or a second direction

36. The method of claim 33, wherein the storage unit, the wheel members and the rail arrangement comprise a set of components that are configured to be transported

together in a disassembled state to an installation site including the support surface, and to be assembled at the installation site wherein the rail arrangement is adapted to be secured to the support surface of the installation site, and wherein the storage unit when assembled is engageable with the at least one rail via the wheel members to provide movement of the storage unit on the rail arrangement relative to the support surface.

37. The method of claim 36, wherein the step of securing the rail arrangement to the support surface is carried out by positioning rail members defined by the rail arrangement in either an end-to-end relationship to provide the first configuration, or in a spaced apart, parallel relationship to provide the second configuration.

38. The method of claim 37, wherein the step of securing the rail arrangement to the support surface is carried out by means of an adhesive interposed between the rail members and the support surface.

39. The method of claim 37, further comprising the step of interconnecting a stop arrangement with the rail arrangement to control the movement of the storage units on the rail arrangement.

40. The method of claim 39, wherein the step of interconnecting a stop arrangement with the rail arrangement is carried out in the first configuration by securing a stop member to each of a pair of spaced apart ends defined by the end-to-end rail members, wherein each stop member is configured to engage at least one of the wheel members of and endmost one of the storage units to maintain the wheel members of the endmost storage unit on the rail member to which the stop member is secured.

41. The method of claim 40, wherein the step of interconnecting a stop arrangement with the rail arrangement is carried out in the second configuration by securing a stop member to an end area defined by each of a pair of adjacent rail members to which each storage unit is mounted, wherein the stop member is configured to maintain a rearward set of wheel members associated with the storage unit in engagement with the pair of adjacent rail members and to enable a forward set of wheel members associated with the storage unit to move off the adjacent rail members onto the supporting surface when the storage unit is moved to the extended position from the retracted position.